

In the Claims

Please replace the claims with the following clean version of the entire set of pending claims, in accordance with 37 C.F.R. § 1.121(c)(1)(i). Cancel all previous versions of any pending claim.

A marked-up version showing amendments to any claims being changed is provided in one or more accompanying pages separate from this amendment in accordance with 37 C.F.R. § 1.121(c)(1)(ii). Any claim not accompanied by a marked-up version has not been changed relative to the immediate prior version, except that marked-up versions are not being supplied for any added claim or canceled claim.

CLAIMS

Cancel claims 10 and 21.

22. (Amended) A method of forming a refractory metal silicide comprising:

forming a refractory metal silicide of a first crystalline phase;

31 providing compressive stress inducing atoms within the refractory metal silicide of the first crystalline phase, the compressive stress inducing atoms being larger than silicon atoms of the silicide;

with the compressive stress inducing atoms within the first phase refractory metal silicide of the first crystalline phase, annealing the refractory metal silicide of the first crystalline phase under conditions effective to transform said silicide to a more dense second crystalline phase; and

wherein the refractory metal silicide comprises TiSi_x , and the first crystalline phase is C49 and the second crystalline phase is C54.

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24. (Amended) A method of forming a refractory metal silicide comprising:

forming a refractory metal silicide of a first crystalline phase;

providing compressive stress inducing atoms within the refractory metal

g X
Bom silicide of the first crystalline phase, the compressive stress inducing atoms being larger than silicon atoms of the silicide;

with the compressive stress inducing atoms within the first phase refractory metal silicide of the first crystalline phase, annealing the refractory metal silicide of the first crystalline phase under conditions effective to transform said silicide to a more dense second crystalline phase; and

further comprising *in situ* providing the compressive stress inducing atoms into a refractory metal layer during deposition of said refractory metal layer over an underlying silicon containing substrate; and

annealing the refractory metal layer to form said refractory metal silicide of the first crystalline phase from the refractory metal and silicon of the underlying substrate.

25. (Amended) A method of forming a refractory metal silicide comprising:

forming a refractory metal silicide of a first crystalline phase;

providing compressive stress inducing atoms within the refractory metal silicide of the first crystalline phase, the compressive stress inducing atoms being larger than silicon atoms of the silicide;

with the compressive stress inducing atoms within the first phase refractory metal silicide of the first crystalline phase, annealing the refractory metal silicide of the first crystalline phase under conditions effective to transform said silicide to a more dense second crystalline phase; and

wherein the compressive stress inducing atoms comprise Ge.

26. A method of forming a refractory metal silicide comprising:
forming a refractory metal silicide of a first crystalline phase;
providing compressive stress inducing atoms within the refractory metal
silicide of the first crystalline phase, the compressive stress inducing atoms
being larger than silicon atoms of the silicide;
with the compressive stress inducing atoms within the first phase
refractory metal silicide of the first crystalline phase, annealing the refractory
metal silicide of the first crystalline phase under conditions effective to
transform said silicide to a more dense second crystalline phase; and
comprising providing the atoms to a concentration within the refractory
metal silicide from 10^{16} - 10^{22} atoms/cm³.

Cancel claims 27-44.

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45. A method of forming a refractory metal silicide comprising:
forming a refractory metal on a first side of a silicon containing substrate;
providing a compressive stress inducing material proximate the refractory metal;
after providing the compressive stress inducing material, annealing the refractory metal to form a refractory metal silicide of a first crystalline phase from the refractory metal and silicon of the underlying substrate;
annealing the refractory metal silicide of the first crystalline phase to transform the first phase silicide to a more dense second crystalline phase;
and
comprising providing the compressive stress inducing material under the first crystalline phase refractory metal silicide.

Cancel claims 46-51. ✓